are absent from the main feeding grounds, for sufficient reserve in the shape of blubber is stored during the main feeding season to tide them over the period when the animals are away on their northern sojourn.

17, CLARKE STREET, KHANDALLAH, WELLINGTON, N. 5, NEW ZEALAND, January 28, 1964.

CHARLES McCANN

3. COMMUNAL BREEDING IN THE WHITEHEADED BABBLER [TURDOIDES AFFINIS (JERDON)] IN TAMBARAM, MADRAS STATE

Some common Indian babblers of the genus *Turdoides* Cretzschmar are well known for their communal life.

The interesting fact of their taking a communal interest in breeding activity was observed by Malcolm MacDonald (J. Bombay nat. Hist. Soc. 56: 132-133 and BIRDS IN MY INDIAN GARDEN, pp. 170-171), who recorded noting more than a pair of Jungle Babblers [Turdoides striatus (Dumont)] in Delhi showing interest in constructing a single nest, defending the eggs and nestlings when approached, and feeding the young ones in the nest as well as after they left the nest. He noted a similar communal nest-construction in the Large Grey Babbler [Turdoides malcolmi (Sykes)] also. Earlier Bates (J. Bombay nat. Hist. Soc. 40: 125 and 56: 130-131) noted communal nestfeeding in the Jungle Babbler [Turdoides striatus (Dumont)] at Agra and Madras. Dharmakumarsinhji (J. Bombay nat. Hist. Soc. 58: 512) recorded communal defence of the fledglings of the Large Grey Babbler [Turdoides malcolmi (Sykes)], and Lowther (A BIRD PHOTO-GRAPHER IN INDIA, p. 26) observed six different Jungle Babblers [Turdoides striatus (Dumont)] feeding three young ones in a nest.

The Whiteheaded Babbler [Turdoides affinis (Jerdon)] is distributed throughout peninsular India and Ceylon. Details of its breeding biology are poorly known. It is very common in the scrub jungles around Madras, and is a common resident bird of the Madras Christian College Estate. Recently, a flock of seven in our garden started nesting right under our upstairs window, a splendid opportunity for my wife and me to observe the details of their breeding for about a month.

Construction of the Nest. A five-forked point of a branch at a height of 2.10 m. in a very bushy 3 m. high croton was chosen. Nesting commenced on 30th August, Three or four birds actively participated and all the nest material was collected from within about 9 m. of the nesting site. The three active participants divided the labour among themselves and each faithfully performed its part. One collected dried neem twigs from the ground, another collected the exposed live rootlets of the garden plant Ervatamia coronaria Stapf (Tamil: Nandiyāvattam), and the third collected green shoots of the weed Hemidesmus indicus R. Br. (Tamil: Nannārī). The two latter struggled hard, pulling out of the ground and breaking off long pieces from live plants. They worked all day at times unmindful of close passers-by, and completed the nest in three days. Meanwhile, the rest of the flock were engaged in their routine activities near by.

The completed nest was a wide-mouthed, or rather an open, bowl with a diameter of 8 cm. at the rim and about 5 cm. deep at the centre. It was rather coarse, with thicker twigs and rootlets loosely interwoven on the exterior and thin neem twigs closely lining it internally. Just a few green weeds were used; the nest had no fine lining other than the neem twigs. Some adjacent croton leaves were found stuck into the sides of the nest, thereby providing a good camouflage.

Incubation. About a day or two after the completion of the nest, on the 3rd or 4th September, four eggs of the usual unmarked turquoise blue colour were seen in it. Incubation commenced straightaway, and a sitting bird was noted always on the eggs. Only once we noted the sitting bird changing turns with another. The sitting bird was usually reluctant to get off the nest until we got very close to it, and eventually got up with loud protests inviting in a moment the rest of the flock, all of which would hover over us or perch at different spots and chatter loudly with tails spread out and wings half open and quivering. This communal nest-defence was noted not only during incubation but also when the young were in the nest. Several times, we noted the flock chasing and pecking violently at a Jungle Crow or a Koel that chanced to pass close to the nest, and once even a mongoose on the ground was chased away.

Hatching. The first chick hatched out on the 18th, the second on the 19th, and the third on the 21st. Of the three, the earliest was decidedly the largest and it grew faster, developing feather-follicles on the third day and long quills on the back and sides of the body and

on the wings by the fifth day. The fourth egg did not hatch. It was noted on the 23rd September that one of the smaller chicks and the unhatched egg were thrown out of the nest. The culprit is obvious from the fact that the large chick ultimately turned out to be a Pied Crested Cuckoo (see Bates, J. Bombay nat. Hist. Soc. 40: 125).

While the chicks were in the nest, the parent bird did not sit on them but stood with its legs wide apart perched on the nest-rim. At roosting only one of the birds stayed at the nest.

Feeding at the Nest. Feeding commenced after the third chick hatched out. Most members of the flock, including even the sitting bird, joined in the search for food. Sometimes, when three or four found food, all would fly to the nest with characteristic calls, alight near it, and one by one go on to the nest and feed the chicks. Meanwhile, the others would also fly to the nest—they seemed to act as a guard and would warn the feeders against intruders. Feeding was usually done in the cool hours of the morning and the evening, and not during the sunny part of the day. The food consisted of insects, spiders, whip-scorpions, and the like. Once I saw a week-old Garden Lizard (Calotes versicolor) being brought by an adult but, as I watched eagerly to see what followed, the adult probably being impatient of my continued presence swallowed the food itself. I noted this habit often, that when the food could not reach the chicks soon the finders themselves swallowed the food that they had brought.

Care of the fledglings. On 30th September the Pied Crested Cuckoo started getting out of the nest and wandering near by in the croton bush. The young babbler was not so venturesome but kept to the nest. On 1st October, the whole babbler flock followed their young fledgling into the garden, leaving the Pied Crested Cuckoo alone in the croton bush. They no longer fed the Pied Crested Cuckoo, but attended their own babbler fledgling, and did not return to the nest. After one day of loneliness, the young Cuckoo disappeared.

DEPARTMENT OF ZOOLOGY, MADRAS CHRISTIAN COLLEGE, TAMBARAM, SOUTH INDIA, January 12, 1964.

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